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Israel has anti-missile plan for jets Commercial airliners to get protection against some shoulder- fired rockets

[Paul J. Caffera, Special to The Chronicle](#)

Prime Minister Ariel Sharon has ordered the installation of anti-missile systems on Israel's El Al and Arkia airliners, according to Israeli government officials and defense contractors with knowledge of the decision.

"We in Israel have determined that shoulder-fired missiles pose an imminent threat to airliners," a government official, speaking on condition of anonymity, told The Chronicle.

The decision marks the first time a government has moved to fund anti-missile systems to protect commercial airliners from shoulder-fired missiles, which are lightweight, easy to use and readily available on the international black market.

Israel has been especially concerned about the threat since two surface-to-air missiles narrowly missed an Israeli Boeing 757 charter jet full of vacationers in Mombasa, Kenya, last November. Since that incident, a number of U.S. lawmakers, including California Democratic Sen. Barbara Boxer, have been pushing the U.S. government to equip America's commercial airliners with anti-missile systems.

The system Israel is poised to install is called Flight Guard and is produced by the Elta subsidiary of Israel Aircraft Industries. The system, according to Israeli industry sources, is already installed on 150 airplanes around the world, including two "large VIP Boeing aircraft" and some NATO military aircraft, including German C-130 cargo planes.

It works by detecting a missile launch and then deploying canisters of "special materials," often described as flares, that ignite in the air and provide a false target for the missile to attack.

Such flare-based systems have a good track record against early-generation shoulder-fired missiles, which the military calls MANPADS, for man-portable air defense systems. Unfortunately, many more advanced shoulder-fired missiles are programmed with sophisticated tracking capabilities that allow the infrared-homing missile to distinguish between flares and the targeted aircraft.

DOUBTS ABOUT ISRAEL'S

Friday, August 29, 2003

San Francisco Chronicle

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SYSTEM

Capt. James Shilling, a pilot and spokesman on legislative and security issues for the Coalition of Airline Pilots Associations, based in Washington, welcomed Israel's decision. But he questioned whether a flare-based system such as Flight Guard is the solution.

"I can't see going down that road," he said. "We should deploy the most advanced system we can buy."

A better solution, according to experts inside the Department of Defense and the Department of Homeland Security, is an anti-missile system called "directed infrared countermeasures." It detects a missile launch by identifying ultraviolet radiation in the missile plume and then firing pulses of light onto the missile's homing device. The pulses "confuse" the rocket's guidance system, making it veer away from its intended victim. The most effective of these systems uses lasers to generate the light pulses.

The U.S. Air Force recently began installing this type of the system, called Large Aircraft Infrared Countermeasures System, on its large, relatively slow transport aircraft -- the planes most similar to commercial jets.

Boxer, House Aviation Subcommittee Chairman Rep. John Mica, R-Fla., and Rep.

Steve Israel, D-N.Y. are among the strongest proponents of installing these more sophisticated anti-missile systems on America's airliners. Cost estimates for deploying the system on U.S. commercial airplanes run from \$10 billion to \$18 billion.

Although there is no record of a serious missile attack on a U.S. commercial airliner, Pentagon documents show that since the first successful shoulder-fired attack on a civil aircraft -- an Air Vietnam DC-4 in 1974 -- such missiles have hit at least 43 civil aircraft, shooting down at least 30 planes.

About 1,000 passengers and crew have perished in these attacks, including 130 people killed in a 1983 attack on a Boeing 737 over Angola and at least 75 killed when a Russian Tupelov 154 aircraft was downed over the Georgian republic of Abkhazia, in 1993.

LAWMAKERS SEEK ACTION

Shortly after the Mombasa attack, Boxer and Sen. Charles Schumer, D-N.Y. and Rep. Israel introduced bills calling on the Bush administration to equip America's commercial airliners with the Air Force laser system. Administration opposition has stalled the proposal, as well as a proposal by Mica that would have provided \$30 million to study ways of adapting military countermeasures systems to commercial aircraft.

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Instead, the administration allocated just \$2 million to combat the MANPADS threat and proposed no anti-MANPADS funding in its 2004 Department of Homeland Security budget.

However, Mica and Sen. Robert Byrd, D-W.Va., recently secured a congressional commitment for \$60 million for anti-MANPADS research. Though the budget is not yet official, both lawmakers see this initial funding as secure.

"With such agreement, I expect that the work finally will get under way," said Byrd. "Unfortunately, because of White House obstinacy earlier this year, the work is several months behind where it should be."

In May, the Homeland Security Department presented a plan to Congress to research and develop a lower-cost alternative to the Air Force's system, which costs about \$3 million per aircraft.

But Rep. Israel points out that under the plan, research into modifying the Air Force anti-missile system will not be completed before 2006.

"The solution is not to further study what we already know," said Israel. "The solution is to equip America's 6,800 commercial aircraft with the same countermeasures that our military aircraft have been using for years."

Paul J. Caffera, a freelance writer based in New York, is a regular contributor to The Chronicle on terrorist threats to aviation.

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